Proposed by Planning Commmission BILL NO. 4068

Introduced by Councilman Lauer ORDINANCE NO. 4251

AN ORDINANCE AMENDING SUBSECTIONS 405.010 AND ADDING SUBSECTION 405.020.BB AND SECTION 407.150 OF THE CODE OF ORDINANCES, CITY OF BLUE SPRINGS, MISSOURI, TO REGULATE THE LOCATION AND INSTALLATION OF MICRO- WIND TURBINES

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BLUE SPRINGS, MISSOURI, AS FOLLOWS:

Section 1: That Sections 405.010 of the Code of Ordinances, City of Blue Springs, Missouri, the Use Table, is hereby amended to add a row entitled "Micro-Wind Turbines" in its alphabetical position in the "Public, Quasi-Public and Commercial Uses" division of the "Use Type" column. Said row will contain a "C" in the boxes for the "LI" and "HI" zoning districts and "BB" in the box for the "Conditions," such that Micro-Wind Turbines will not be permitted-by-right uses in any zoning districts but will be allowed if approved as Conditional Uses in the Light Industrial and Heavy Industrial districts and will subject to the Special Use Standards of Subsection BB of Section 405.020.

Section 2: That in all other respects, Section 405.010 of the Code of Ordinances, City of Blue Springs, Missouri, shall remain as presently enacted.

Section 3: That the Code of Ordinances, City of Blue Springs, Missouri, is hereby amended by adding Subsection 405.020.BB, which said Subsection shall read as follows:

"BB. *Micro-Wind Turbines –*

1. Micro Wind Turbines (MWT) shall comply with all applicable regulations in Section 407.150.
2. Micro Wind Towers shall only be allowed in conjunction with a Conditional Use Permit (CUP) pursuant to the provisions of Section 403.060 of the UDC.
3. Micro-Wind Turbines in the Adams Dairy Parkway Overlay District do not require Appearance Review.
5. Individual Monopole MWT towers shall not exceed 60 ft. above the ground , including the tower and blade radius. Use of lattice type towers or structures is prohibited.
6. Maximum aggregate wind turbine height for all MWTs on a parcel shall be 200 ft.
7. MWTs are limited to providing electricity up to 10 kilowatts.
8. MWTs shall be mounted on a free standing monopole only. Building mounted systems are prohibited."

Section 4: That the Code of Ordinances, City of Blue Springs, Missouri, is hereby amended by adding Section 407.150, which said Section shall read as follows:

“407.150 MICRO-WIND TURBINES (MWT)

A. *Intent.* In order to balance the need for clean, renewable energy resources and the necessity to protect the public health, safety and welfare of the community, the city finds that these regulations are necessary in order to ensure that Micro-Wind Turbines (MWTs) and subsequent Wind Energy Conversion Systems (WECS) are appropriately designed, sited and installed.

B. *Purpose*. The purpose of the ordinance is to provide a regulatory scheme for the construction and operation of MWTs, providing electricity up to 10 kilowatts, subject to reasonable restrictions, which will preserve the public health and safety, and minimize the visual, environmental and operational impacts of MWTs on the City and its Residents.

C. *Findings*. The City finds that wind energy is an abundant, renewable and nonpolluting energy resource and that its conversion to electricity will reduce our dependence on nonrenewable energy resources and decrease air pollution that results from the use of conventional energy sources. MWTs also enhance the reliability and power quality of the power grid, reduce peak power demands and help diversify the state's energy supply portfolio.

D. Required submittal Information. The following information may be additionally required with any CUP application that includes a MWT.

1. Standard engineering drawings of the MWT structure, including the tower, base and footings. Engineering drawings of access roads. An engineering analysis and certification of the tower, showing compliance with all local, state and federal laws, standards and regulations and the applicable building code(s).
2. Data pertaining to the tower's safety and stability, including safety results from test facilities.
3. For any individual MWT tower a project visibility map and photo-simulation shall be required. The visibility map and photo-simulation should be based on a digital elevation model or digital simulation showing the impact of topography and man-made features upon visibility of the project from each of the four compass points to a radius of not less than 2,000 feet from the center of the project. The base map used for the project visibility map shall be a published topographic map showing man-made features, such as roads and buildings. Additional radius distances or perspectives may be requested by Community Development if deemed appropriate.
4. A survey map at an appropriate scale showing the proposed location of the MWT (including access roads) as it relates to the boundaries of the parcel, adjacent ownerships and existing residences, schools, churches, hospitals, or libraries to a distance of 2,000 feet.
5. A description of compliance with all applicable Federal, State or local laws and regulations, including Sections 386.890, RSMo and 4 CSR

240-20.065 if applicable, and including all provisions within this zoning ordinance.

6. A description of the safety precautions provided in order to ensure that the structure will not be detrimental to adjacent properties in the case of high winds and/or if the unit fails.
7. A copy of the warranty deed and any lease or leases for the property on which the MWT facility is to be located.
8. An accurate wind directional map provided by an expert in such matters such as a meteorologist.
9. Turbine information on the type, model, size, height, rotor material, rated power output, performance, safety, and noise characteristics of each wind turbine being proposed, tower and electrical transmission equipment.
10. Additional information may be required as deemed necessary and appropriate by City Staff.

E. Safety Regulations and Standards

1. The minimum distance between the ground and any part of the rotor blade system shall be fifteen (15) feet.
2. To limit unauthorized access:

a. a fence six feet high with a locking portal shall be placed around the facility's tower base; or

b. the tower climbing apparatus shall be limited to no lower than 15 feet from the ground; wind turbine towers shall not be climbable up to 15 feet above ground level; or

3. All access doors to the MWT and electrical equipment shall be lockable.
4. Signs shall be limited to the manufacturer's or installer's identification, and appropriate warning signs (e.g. electrical hazard or high voltage) placed on the wind turbine tower(s), electrical equipment, and the wind turbine. Commercial advertising is strictly prohibited.
5. Lighting shall be the minimum necessary for safety and security purposes and techniques shall be used to prevent casting glare from the site, except as otherwise required by the Federal Aviation Administration (FAA) or other applicable authority. Wind energy facilities shall not be artificially lighted, except to the extent required by the FAA or other applicable authority.
6. Safety Shutdown. Each MWT shall be equipped with both manual and automatic overspeed controls to limit the rotational speed of the blade within the design limits of the rotor. Manual electrical and/or overspeed shutdown disconnect switches shall be provided and clearly labeled on the wind turbine structure. No wind turbine shall be permitted that lacks an automatic braking, furling, or feathering system to prevent uncontrolled rotation, overspeeding and excessive pressure on the tower structure, rotor blades, and turbine components.

7. Prior to issuance of a building permit, the applicant shall provide proof of a level of insurance in the minimum amount required by State law, the Customer-Generator Liability Insurance Obligation section of 4 CSR 240-20.065 or other applicable provisions of the Code of State Regulations, to cover damage or injury that might result from the failure of a tower or towers or any other part or parts of the generation and transmission facility. Said insurance shall remain in place every year that the MWT is in place or operation
8. Any wind energy system found to be unsafe by the by the Community Development Director or his designate shall be repaired by the owner to meet federal, state and local safety standards and regulations, or it shall be removed within six months. If any wind energy system is not operated for a continuous period of 12 months, the City of Blue Springs will notify the landowner by registered mail and provide 45 days for a response. In such a response, the landowner shall set forth reasons for the operational difficulty and provide a reasonable timetable for corrective action. If the City deems the timetable for corrective action as unreasonable the City shall notify the landowner and such landowner shall remove the turbine within 30 days of receipt of notice from the City.
9. Building Codes Safety Standards. Prior to the issuance of a building permit to construct a facility the owner/applicant or operator/applicant shall provide the City with all required licenses and certifications from Federal, State and County agencies if needed. To ensure the structural integrity of towers, the owner or operator of a tower shall ensure that it is maintained in compliance with standards contained in applicable Federal, State or local Building Codes and the applicable standards for towers that are published by the Electronic Industries Association, as amended from time to time. In addition, if the wind energy system is interconnected and operates in parallel phase and synchronization with a retail electric supplier, all applicable safety, performance, interconnection, and reliability standards established by the National Electrical Code, the National Electrical Safety Code, the Institute of Electrical and Electronics Engineers, Underwriters Laboratories, and the Federal Energy Regulatory Commission shall be met.
10. Utility Connections. Reasonable efforts shall be made to locate utility connections from the wind facility underground, depending on appropriate soil conditions, shape, and topography of the site and any requirements of the utility provider. Electrical transformers for utility interconnections may be above ground if required by the utility provider.
11. Electrical Wires. All electrical wires associated with a wind energy system shall be located underground except for those wires necessary to connect the wind generator to the tower wiring, the tower wiring to the disconnect junction box, and the grounding wires.

12. Noise. The noise emitted from any wind turbine shall not exceed 55 dba, as measured at the nearest property line, except during short-term events such as utility outages and severe windstorms.
13. Color/Finish. Wind turbines, exclusive of the towers, shall be painted a non-reflective, non-obtrusive color such as the manufacturer's default color option or a color that conforms to the environment and architecture of the community. Towers shall maintain galvanized steel, brushed aluminum or white finish, unless FAA standards require otherwise.
14. The appearance of all towers and MWTs shall be maintained in manner that is consistent with the originally approved colors and finishes.
15. Minimum setbacks. A Wind Turbine shall be setback one hundred ten percent (110%) of the Wind Turbine height from the nearest property line of the property on which it is located. Setback requirements shall be measured from the base of the tower to the perimeter of the property (property line) on which it is located and shall meet or exceed the setbacks of the applicable zoning district. The same setback is required from overhead-transmission lines. In addition the Wind Turbine shall be setback a minimum of 400 feet from any residential structure, which shall be measured from the base of the tower to the nearest residential structure. The equipment or associated equipment structure shall meet the minimum setbacks required for an accessory building.

K. *Violations.*

1. It shall be unlawful to violate or fail to perform any of the required provisions of this Section. Each day that a violation continues shall be considered a separate offense. In addition, the violation of any provision of Section 407.150 may be deemed grounds for removal of the MWT and the City may seek any other remedy or damages to the full extent of the law."

Section 4: That Section 411.020 of the Code of Ordinances, City of Blue Springs, Missouri, is hereby amended by adding the following Definitions in their respective alphabetical position which said definitions shall read as follows:

"BLADES: The aerodynamic surface that catches the wind
BRAKING: A method of overspeed control that utilizes a disc brake
DOE: The Federal Department of Energy
ESSENTIAL SERVICE: Those services provided by the City and other governmental entities that are directly related to the health and safety of its residents, including fire, Police and rescue.
FAA: The Federal Aviation Administration.
HORIZONTAL AXIS WIND TURBINES (HAWTs): The type of wind turbine that has the main rotor shaft and electrical generator at the top of the tower, and must be pointed into the wind. The turbine is generally

pointed upwind of the tower, and the blades placed some distance in front of the tower.

LATTICE TOWER: A Small Scale Wind Generation Facility tower that is constructed to be self-supporting by lattice type supports and without the use of guyed wires or other supports.

METEOROLOGICAL OR MET TOWER: A temporary tower designed to support the gathering of wind energy resource data.

MICRO-WIND TURBINE (MWT): A wind energy conversion system (WECS), consisting of a wind turbine, tower (unless roof mounted), and associated control or conversion electronics, which has a rated capacity of 10 kilowatts or less.

MONOPOLE TOWER: A Small Scale Wind Generation facility tower consisting of a single freestanding pole or spire self-supported on a permanent foundation constructed without guy wire, ground anchors, or other supports.

NACELLE: The body of the propeller-type wind turbine.

PRIVATELY OWNED: Owned by any entity other than City owned.

PUBLIC UTILITY: Any publicly owned, franchised or regulated facility for rendering electrical, gas, communications, transportation, water supply, sewage disposal, drainage, garbage or refuse disposal and fire protection to the general public.

SHARED USE WIND GENERATION FACILITY: The use of one Wind Generation Facility by two or more property uses or owners

TURBINE: Part of a wind energy system including the blades and nacelle.

VERTICLE AXIS WIND TURBINES (VAWTs: The type of wind turbine that has the main rotor shaft arranged vertically

WIND ENERGY CONVERSION SYSTEM (WECS): Any machine designed for the purpose of converting wind energy into electrical energy..

WIND GENERATION TOWER: Any structure and support thereto designed and constructed primarily for the purpose of supporting one (1) or more antennas intended for transmitting or receiving personal wireless services, telephone, and similar and other telecommunications purposes and services including lattice, monopole, and guyed towers. The term includes personal wireless service facilities for the provision of commercial mobile services, unlicensed wireless service facilities (telecommunications services using duly authorized devices which do not require individual licenses), and common carrier wireless exchange access services. Also referred to as a "tower." The term does not include radio and television transmission towers, amateur radio transmitting towers and broadcast facilities.

WIND TURBINE GENERATOR: The component of a wind energy conversion system that transforms mechanical energy from the wind into electrical energy.

WIND TURBINE HEIGHT: The height of a tower structure shall be measured from the grade of the surrounding property adjacent to the surface of the tower base to the top of the tower, and does include the height of the blades above the top of tower."

Section 5: That this ordinance shall be in full force and effect from and after its passage and approval.

PASSED by the City Council of the City of Blue Springs, Missouri, and approved by the Mayor of Blue Springs, this 3rd day of August, 2009.

_____
Carson Ross, Mayor

ATTEST:

_____
Kathy Richardson, City Clerk

1st reading August 3, 2009
2nd reading August 3, 2009

OWindturbines080309